

1      **CLAIMS**

2

3    1. A computer-readable medium comprising computer-executable instructions  
4    that perform the following when executed by a computer:

5                determine if contents of a folder of a computer filing system are changed  
6    without scanning the contents;

7                scan the contents if the contents are changed; and

8                modify a media library to reflect the change in the contents if the change  
9    includes addition or deletion of a media file.

10

11    2. The computer-readable medium of claim 1, wherein the contents include a  
12    subfolder and sub-contents of the subfolder and further comprising:

13                determine, prior to the scan of the contents, if the sub-contents of the  
14    subfolder are changed without scanning the sub-contents, and wherein the scan of  
15    the contents excludes the subfolder if the sub-contents of the subfolder have not  
16    changed.

17

18    3. The computer-readable medium of claim 1, wherein the determination  
19    includes:

20                accessing a record to find a previous time that the folder was last modified;  
21                determining a current time that the folder was most recently modified; and  
22                comparing the current time with the previous time.

23

24    4. The computer-readable medium of claim 1, wherein the determination  
25    includes:

1           communicating with the computer filing system across a communications  
2 network.

3

4       5. The computer-readable medium of claim 1, wherein the determination, scan,  
5 and modification are performed without user interaction.

6

7       6. The computer-readable medium of claim 1, wherein the modification  
8 includes:

9           determining, if the change includes addition of the media file, whether a  
10 user has previously deleted a reference to the media file from the media library;  
11 and

12           ceasing the modification if the user has previously deleted the reference to  
13 the media file from the media library.

14

15       7. The computer-readable medium of claim 1, further comprising:

16           modify the media library to reflect the change in the contents if the change  
17 includes relocation of the media file.

18

19       8. The computer-readable medium of claim 1, further comprising:

20           alter an address for a hyperlink of the media library to reflect the change in  
21 the contents if the change includes relocation of the media file to the address.

22

23       9. The computer-readable medium of claim 1, wherein the modification  
24 includes:

1 adding to the media library a hyperlink to an address of the media file, if  
2 the change includes addition of the media file.

3

4 10. The computer-readable medium of claim 1, wherein the modification  
5 includes:

6 deleting from the media library a hyperlink to an address of the media file,  
7 if the change includes deletion of the media file.

8

9 11. The computer-readable medium of claim 1, wherein the modification  
10 includes:

11 adding to the media library metadata associated with the media file, if the  
12 change includes addition of the media file.

13

14 12. The computer-readable medium of claim 1, wherein the modification  
15 includes:

16 determining, if the change includes addition of the media file, whether there  
17 is a reference in the media library to another media file that is similar to the media  
18 file; and

19 ceasing the modification if the media library includes the reference to the  
20 other media file.

21

22 13. A computer-readable medium comprising computer-executable instructions  
23 that perform the following when executed by a computer:

24 determine a first time that a folder in a computer filing system was most-  
25 recently modified;

1       determine, after an amount of time passes, a second time that the folder was  
2       most-recently modified;

3              compare the first time with the second time;  
4              scan media-file contents of the folder if the first time and the second time  
5       are not equivalent; and

6              modify a media library if the media library does not reflect the media-file  
7       contents of the folder.

8  
9       **14.**     The computer-readable medium of claim 13, further comprising:

10          record into a record the first time prior to determining the second time; and  
11          load the record containing the first time prior to comparing the first time  
12       with the second time.

13  
14       **15.**     The computer-readable medium of claim 13, further comprising:

15          record into a record the first time prior to determining the second time; and  
16          load the record containing the first time prior to comparing the first time  
17       with the second time,

18              wherein the determination of the first time includes reading the record.

19  
20       **16.**     The computer-readable medium of claim 13, further comprising:

21          record into a record that the first time and the second time are not  
22       equivalent if the first time and the second time are not equivalent and prior to  
23       scanning the media-file contents of the folder.

1       17. The computer-readable medium of claim 13, wherein the modify the media  
2 library includes adding a link to a new media file if the media-file content includes  
3 the new media file but the media library does not include the link to the new media  
4 file.

5

6       18. The computer-readable medium of claim 13, wherein the modify the media  
7 library includes deleting a link to a missing media file if the media-file content  
8 does not include the missing media file but the media library does include the link  
9 to the missing media file.

10

11      19. The computer-readable medium of claim 13, wherein the modify the media  
12 library includes altering a link to a missing media file if the media-file content  
13 does not include the missing media file and a second media-file content of a  
14 second folder does include the missing media file.

15

16      20. The computer-readable medium of claim 13, further comprising:  
17           determine a second folder's first time that a second folder in the computer  
18           filing system was most recently modified;

19           determine, after a second amount of time passes, a second folder's second  
20           time that the second folder was most recently modified;

21           compare the second folder's first time with the second folder's second time;  
22 and

23           prior to scanning the media-file contents of the folder, record into a record  
24           that the first time and the second time are not equivalent if the first time and the  
25           second time are not equivalent and that the second folder's first time and the

1 second folder's second time are not equivalent if the second folder's first time and  
2 the second folder's first time are not equivalent.

3  
4 21. The computer-readable medium of claim 13, wherein the modification  
5 includes:

6 determining, if the media-file contents include a media file and the media  
7 library does not reflect the media file, whether a user has previously deleted a  
8 reference to the media file from the media library; and

9 ceasing the modification if the user has previously deleted the reference to  
10 the media file from the media library.

11  
12 22. The computer-readable medium of claim 13, wherein the modification  
13 includes:

14 altering a hyperlink in the media library to include a new address for the  
15 media file if: the media-file contents do not include the media file; the media  
16 library includes an old hyperlink to an old address for the media file; and a second  
17 media-file contents of a second folder in the computer filing system include the  
18 media file.

19  
20 23. A method comprising:

21 reading a record containing old times that one or more folders in a  
22 computer's filing system were last modified;

23 determining a new time that a first folder of the one or more folders in the  
24 computer's filing system was last modified;

1       comparing the new time for the first folder with the old time for the first  
2       folder;

3       scanning media-file contents of the first folder if the new time and the old  
4       time of the first folder are not equivalent; and

5       modifying, if the media-file contents of the first folder have changed, a  
6       media library based on the change.

7

8       **24.** The method of claim 23, further comprising:

9       marking in the record, prior to the determining the new time for the first  
10      folder, that each of the one or more folders needs to have new times determined.

11

12       **25.** The method of claim 23, further comprising:

13       marking in the record, prior to the determining the new time for the first  
14      folder, that each of the one or more folders needs to have new times determined;  
15      and

16       marking in the record, after the comparing, that the first folder needs to be  
17      scanned if the new time and the old time are not equivalent or does not need to be  
18      scanned if the new time and the old time are equivalent.

19

20       **26.** The method of claim 23, further comprising:

21       marking in the record, prior to the determining the new time for the first  
22      folder, that each of the one or more folders needs to have new times determined;

23       marking in the record, after the comparing, that the first folder needs to be  
24      scanned if the new time and the old time are not equivalent or does not need to be  
25      scanned if the new time and the old time are equivalent;

1 determining, prior to the scanning of the first folder if the new time and the  
2 old time of the first folder are not equivalent, a second folder's new time that a  
3 second folder of the one or more folders in the computer's filing system was last  
4 modified; and

5 comparing the second folder's new time with the old time for the second  
6 folder.

7

8 27. The method of claim 23, further comprising:

9 marking in the record, prior to the determining the new time for the first  
10 folder, that each of the one or more folders needs to have new times determined;

11 marking in the record, after the comparing, that the first folder needs to be  
12 scanned if the new time and the old time are not equivalent or does not need to be  
13 scanned if the new time and the old time are equivalent;

14 determining, prior to the scanning of the first folder if the new time and the  
15 old time of the first folder are not equivalent, a second folder's new time that a  
16 second folder of the one or more folders in the computer's filing system was last  
17 modified; and

18 comparing the second folder's new time with the old time for the second  
19 folder and then mark in the record that the second folder needs to be scanned if the  
20 second folder's new time and the old time of the second folder are not equivalent  
21 or does not need to be scanned if the second folder's new time and the old time of  
22 the second folder are equivalent.

23

24 28. A computer-readable medium comprising computer-executable instructions  
25 that perform the following when executed by a computer:

1       determine that two or more folders in a computer filing system have been  
2 modified;

3       determine which of the two or more folders is most recently modified;

4       scan a media-file content of the most-recently-modified folder; and

5       modify a media library to reflect the media-file content of the most-  
6 recently-modified folder if the media-file content of the most-recently-modified  
7 folder is not reflected in the media library.

8

9       **29.** The computer-readable medium of claim 28, further comprising:

10      scan a media-file content of one of the two or more folders that were not  
11 most recently modified after the scan of the most-recently-modified folder; and

12      modify the media library to reflect the media-file content of the one folder  
13 if the media-file content of the one folder is not reflected in the media library.

14

15       **30.** The computer-readable medium of claim 28, wherein the scan is performed  
16 prior to scanning any other folder of the two or more folders.

17

18       **31.** A computer-readable medium comprising computer-executable instructions  
19 that perform the following when executed by a computer:

20       determine that a folder in a computer filing system has been modified since  
21 an application began running that is capable of synchronizing media content of the  
22 folder with a media library;

23       scan the media content of the folder; and

24       modify the media library to reflect the media content of the folder if the  
25 media content of the folder is not reflected in the media library.

1           **32.** The computer-readable medium of claim 31, further comprising:

2                 determine, prior to the scan of the media content of the first folder, that a  
3 second folder in the computer filing system has been modified since the  
4 application began running; and

5                 scan the media content of the second folder prior to the scan of the first  
6 folder.

7

8           **33.** The computer-readable medium of claim 31, further comprising:

9                 determine, prior to the scan of the media content of the first folder, that a  
10 second folder in the computer filing system has been modified since the  
11 application began running; and

12                 scan the media content of the second folder,  
13                 wherein the scan of the first folder is performed prior to the scan of the  
14 second folder.

15

16           **34.** The computer-readable medium of claim 31, further comprising:

17                 determine that one or more other folders in the computer filing system have  
18 been modified prior to the application beginning to run,

19                 wherein the scan of the folder is performed prior to the scan of the one or  
20 more other folders.

21

22           **35.** A computer-readable medium comprising computer-executable instructions  
23 that perform the following when executed by a computer:

1       determine if a media file has just been added to or deleted from a memory  
2 device; and

3           alter a media library to include a reference to the media file if it is added or  
4 remove the reference to the media file if it is deleted.

5  
6       **36.**      The computer-readable medium of claim 35, wherein the determination  
7 includes:

8           receiving notification that a folder containing or having once contained the  
9 media file has been modified;

10          scanning the folder to determine a current content of the folder; and

11          comparing the current content of the folder with a prior content of the  
12 folder.

13  
14       **37.**      The computer-readable medium of claim 35, wherein the alteration of the  
15 media library includes:

16          adding a hyperlink to the media file if it is added or removing the hyperlink  
17 to the media file if it is deleted from the folder.

18  
19       **38.**      The computer-readable medium of claim 35, wherein the alteration  
20 includes:

21          determining, if the media file is added to the folder, whether a user has  
22 previously deleted an old reference to the media file from the media library; and

23          ceasing the alteration if the user has previously deleted the old reference.

1       **39.**   The computer-readable medium of claim 35, wherein the determination  
2 further includes:

3              determining if the media file has just been moved from a first location in a  
4 memory device to a second location in the memory device, and the alteration  
5 further includes:

6              altering a reference to the media file to include a hyperlink to the second  
7 location if the media file has just been moved.

8

9       **40.**   A method comprising:

10             determining if a media file has been removed from a first folder of a  
11 computer's filing system;

12             determining if the media file has been added to a second folder of the  
13 computer's filing system; and

14             altering, if the media file has been removed from the first folder and added  
15 to the second folder, a reference to the media file in a media library to include an  
16 address of the media file in the second folder.

17

18       **41.**   The method of claim 40, wherein the altering the reference includes adding  
19 a hyperlink to the address of the media file in the second folder.

20

21       **42.**   The method of claim 40, wherein the altering the reference further includes  
22 deleting a hyperlink to an old address of the media file in the first folder.

23

24       **43.**   The method of claim 40, wherein the first folder and the second folder are  
25 child folders to one or more parent folders of the computer's filing system.

1  
2     **44.** A computer-readable medium comprising computer-executable instructions  
3 that perform the following when executed by a computer:

4             receive notification that a folder has just been modified;  
5             determine if a media file within the folder has been added or deleted; and  
6             alter a media library to include a link to the media file if it is added or  
7 remove the link to the media file if it is deleted.

8  
9     **45.** The computer-readable medium of claim 44, further comprising:

10             mark in a record, prior to the determination, that the folder has just been  
11 modified.

12  
13     **46.** The computer-readable medium of claim 44, further comprising:

14             mark in a record, prior to the determination, that the folder has just been  
15 modified; and

16             store the record.

17  
18     **47.** The computer-readable medium of claim 44, further comprising:

19             mark in a record, prior to the determination, that the folder has just been  
20 modified;

21             mark in the record that the determination is performed for the folder after  
22 the determination; and

23             store the record.

24  
25     **48.** The computer-readable medium of claim 44, further comprising:

1           read a record showing whether the determination for the folder has or has  
2       not yet been performed; and

3           performed the determination if the determination has not yet been  
4       performed.

5  
6       **49.** The computer-readable medium of claim 44, further comprising:

7           marking in a record that the folder has just been modified; and

8           pausing to perform the determination until the computer has sufficient  
9       computational cycles to perform the determination.

10  
11      **50.** The computer-readable medium of claim 44, further comprising:

12           marking in a record that the folder has just been modified; and

13           pausing to perform the determination until the computer has sufficient  
14       computational cycles to perform the determination without interfering with a  
15       performance of a media player.

16  
17      **51.** A system comprising:

18           a record capable of retaining information about a folder that contains one or  
19       more media files and is of a computer's directory system, wherein the record  
20       includes:

21           a name of the folder;

22           a modification time of the folder; and

23           an indicator showing whether or not the folder has been modified.

1       **52.** The system of claim 51, wherein the record further includes a second  
2 indicator for the folder showing whether or not the folder has recently had its  
3 modification time checked.

4

5       **53.** The system of claim 51, wherein the record is further capable of mapping  
6 the retained information one-to-one to the folder and any subfolders of the folder.

7

8       **54.** The system of claim 51, wherein the record is configured hierarchically to  
9 match a structure of the computer's directory system.

10

11      **55.** The system of claim 51, wherein the record includes an XML file.

12

13      **56.** An apparatus comprising:

14           means for determining if a media file has just been added to or deleted from  
15 a memory device; and

16           means for altering a media library to include a new reference to the media  
17 file if it is added or remove an old reference to the media file if it is deleted.

18

19      **57.** The apparatus of claim 56, wherein the means for determining includes:

20           means for receiving notification that a folder containing or having once  
21 contained the media file has been modified;

22           means for scanning the folder to determine a current content of the folder;  
23 and

24           means for comparing the current content of the folder with a prior content  
25 of the folder.

1  
2       **58.** The apparatus of claim 56, wherein the means for determining includes:  
3              means for assessing a previous time in which a folder containing or having  
4              once contained the media file was previously modified;  
5              means for assessing a current time in which the folder was most recently  
6              modified;  
7              means for comparing the previous time with the current time; and  
8              means for scanning the folder if the previous time and the current time are  
9              not equivalent.  
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